

## CLAIMS:

1. Device for recording information on a record carrier, the record carrier comprising a track for recording information, which information includes real-time information that is to be reproduced continuously via a rendering system having predefined properties at least including

- 5 - a buffer coupled to a read-out unit,
  - a minimal read-out speed  $R_{disc}$  of the read-out unit for retrieving information from the track into the buffer, and
  - a maximal seek time  $T_{seek}$  for accessing information anywhere on the record carrier,
- the device comprising a head for scanning the track, and a write unit for
- 10 recording information in the track via the head, the information being arranged in files, a file having properties at least including
- a maximal data rate  $R_{file}$  of the file for the real-time information in the file to be reproduced continuously, and
  - a maximal size of header information  $S_{headers}$  that precedes and/or follows the real-time
- 15 information in the file,
- the device having an allocation unit for
- determining a minimal size of an extent  $S_{extent}$  that is a continuous recording unit at least taking into account the properties  $R_{disc}$ ,  $T_{seek}$ ,  $R_{file}$  and  $S_{headers}$ , and
  - recording the information of the files in contiguous parts of the track at least having the
- 20 size of  $S_{extent}$ .

2. Device as claimed in claim 1, wherein the allocation unit comprises an extent unit that contains a number of predefined extent sizes and corresponding maximal data rates available for  $R_{file}$ .

25 3. Device as claimed in claim 1, wherein the allocation unit comprises an extent unit for determining said minimal size or a maximal data rate for  $R_{file}$  based on:  $S_{extent} = ((T_{seek} + S_{headers} / R_{disc}) * R_{file} * R_{disc}) / (R_{disc} - R_{file})$

4. Device as claimed in claim 1, 2 or 3, wherein the device is arranged for determining a disc type and determining the  $S_{\text{extent}}$  taking into account for  $R_{\text{disc}}$  an overhead in dependence of the disc type, in particular a packet overhead for a re-writable disc type.

5. Device for reading information from a track on a record carrier, which information includes real-time information that is to be reproduced continuously via a rendering system having predefined properties at least including

- a buffer coupled to a read-out unit,
- a minimal read-out speed  $R_{\text{disc}}$  of the read-out unit for retrieving information from the track into the buffer, and
- a maximal seek time  $T_{\text{seek}}$  for accessing information anywhere on the record carrier,

the device comprising a head for scanning the track, a read unit for reading information in the track via the head, the information being arranged in files, a file having properties at least including

- a maximal data rate  $R_{\text{file}}$  of the file for the real-time information in the file to be reproduced continuously,
- a maximal size of header information  $S_{\text{headers}}$  that precedes and/or follows the real-time information in the file, and
- being recorded in contiguous parts of the track at least having a size of  $S_{\text{extent}}$  at least taking into account the properties  $R_{\text{disc}}$ ,  $T_{\text{seek}}$ ,  $R_{\text{file}}$  and  $S_{\text{headers}}$ ,

and a read-buffer coupled to the head, the read-buffer having at least a size  $S_{\text{buffer,min}}$  determined taking into account the values of

- a read-out speed  $R_{\text{disc\_dev}}$  of the read unit for retrieving information from the track into the read-buffer, and
- a maximal seek time  $T_{\text{seek\_dev}}$  of the head for accessing information anywhere on the record carrier, and
- the maximal values of the properties  $R_{\text{file}}$  and  $S_{\text{headers}}$  for files to be played:  $R_{\text{file,max}}$  and  $S_{\text{headers,max}}$ .

6. Device as claimed in claim 5, wherein the read-buffer has a size based on:

$$S_{\text{buffer,min}} = ((t_{\text{seek,max}} + S_{\text{headers,max}}/R_{\text{disc,max}}) * R_{\text{file,max}}$$

7. Device as claimed in claim 5, wherein the read unit is arranged for reading a flag from the files indicating whether two files are intended to be played seamless, in particular the file containing the flag and the previous one.

5 8. Method for recording information on a record carrier, the record carrier comprising a track for recording information, which information includes real-time information that is to be reproduced continuously via a rendering system having predefined properties at least including

- a buffer coupled to a read-out unit,

10 - a minimal read-out speed  $R_{disc}$  of the read-out unit for retrieving information from the track into the buffer, and

- a maximal seek time  $T_{seek}$  for accessing information anywhere on the record carrier, and which information is arranged in files, a file having properties at least including

15 - a maximal data rate  $R_{file}$  of the file for the real-time information in the file to be reproduced continuously, and

- a maximal size of header information  $S_{headers}$  that precedes and/or follows the real-time information in the file,

which method comprises

20 - determining a minimal size of an extent  $S_{extent}$  that is a continuous recording unit at least taking into account the properties  $R_{disc}$ ,  $T_{seek}$ ,  $R_{file}$  and  $S_{headers}$ , and

- recording the information of the files in contiguous parts of the track at least having the size of  $S_{extent}$ .

25 9. Method as claimed in claim 8, wherein the method comprises a step of including a flag in the files indicating whether two files are intended to be played seamless, in particular the file containing the flag and the previous one.

10. Method as claimed in claim 8, wherein the maximal size of header information  
30  $S_{headers}$  is determined including additional data that precedes and/or follows the real-time information in the file, in particular lyrics information additional to an audio file.

11. Computer program product for recording information, which program is operative to cause a processor to perform the method as claimed in claim 8, 9 or 10.

12. Record carrier comprising a track that carries information, which information includes real-time information that is to be reproduced continuously via a rendering system having predefined properties at least including

- 5 - a buffer coupled to a read-out unit,  
- a minimal read-out speed  $R_{disc}$  of the read-out unit for retrieving information from the track into the buffer, and  
- a maximal seek time  $T_{seek}$  for accessing information anywhere on the record carrier, and which information is arranged in files, a file having properties at least  
10 including  
- a maximal data rate  $R_{file}$  of the file for the real-time information in the file to be reproduced continuously, and  
- a maximal size of header information  $S_{headers}$  that precedes and/or follows the real-time information in the file, and  
15 the track comprising continuous recording units at least having a size of  $S_{extent}$  at least taking into account the properties  $R_{disc}$ ,  $T_{seek}$ ,  $R_{file}$  and  $S_{headers}$ .

13. Record carrier as claimed in claim 12, wherein the files comprise a flag indicating whether two files are intended to be played seamless, in particular the file  
20 containing the flag and the previous one.